



Washington State Lead Reporting Update March 2003

Statewide Childhood Blood Lead Screening Guidelines

Screening Guidelines In November 2000, the Washington State Department of Health published recommendations for statewide childhood blood lead screening guidelines. The recommendations were developed by a statewide advisory committee. The committee used CDC lead screening guidelines and lead poisoning prevalence data from Washington State to develop their recommendations. The guidelines will be used to help health care providers decide which children are at high risk of lead poisoning and should be screened with a blood test.

Health Care Providers Recommendations to Health Care Providers

1. Because of the low prevalence of elevated blood lead levels in children in Washington State, the Washington State Department of Health (DOH) does not recommend targeted or universal testing of asymptomatic children for lead poisoning. DOH does not recommend the use of a risk factor questionnaire to identify children who should have a blood lead test because no risk factor questions have been shown to be effective in Washington State for identifying asymptomatic children for whom blood lead testing is appropriate. DOH has found a higher risk for elevated blood lead levels in children in nine counties in central Washington (Adams, Benton, Chelan, Douglas, Franklin, Grant, Okanogan, Walla Walla, and Yakima), and DOH will conduct additional study in these counties to determine whether guidelines for targeted screening can be developed.
2. Health care providers should use clinical judgment to identify children who should be tested for blood lead levels. A blood lead test should be performed whenever a parent, guardian, or health care provider suspects that a child is at special risk for lead exposure or if a health care provider finds signs or symptoms consistent with lead overexposure (e.g., anemia, failure to thrive). Additional risk factors health care providers should consider include:
 - Age of housing
 - Renovation and remodeling in old homes
 - Parental occupations involving lead exposure
 - Children observed eating paint chips or showing symptoms of pica
 - Socioeconomic and educational status
 - Former residence outside Washington State

DOH Lead Program Recommendations to the Department of Health

1. DOH should conduct these activities to monitor childhood blood lead levels in Washington State:
 - Conduct periodic focused surveys to monitor or investigate suspected pockets of lead exposure
 - Routinely review blood lead level data from the Childhood Blood Lead Registry

- Issue public health alerts about newly identified sources of lead exposure
2. In the nine counties in Central and Eastern Washington (Adams, Benton, Chelan, Douglas, Franklin, Grant, Okanogan, Walla Walla, and Yakima) where children are at higher risk for elevated blood lead levels, DOH should conduct additional studies to determine whether guidelines for targeted screening can be developed.

The complete report can be viewed and downloaded from the following website:

<http://www.doh.wa.gov/Topics/WALeasScreenRecommend.doc>

Report from the Registry

Since it's inception in 1993 up to December 31, 2002, the DOH Childhood Blood Lead Registry has received reports of 42,439 tests on 39,302 children. During 2002, DOH received reports of 7,918 tests from approximately 23 laboratories. The following table shows the number of tests reported each year. The number of tests increased in 2000, when DOH implemented a screening program in central Washington, and increased again in 2002, when that program was expanded.

Table 1

Test reports received, per year

Year	Number of test reports
1993	1,138
1994	3,375
1995	3,887
1996	5,219
1997	4,417
1998	3,870
1999	3,677
2000	4,623
2001	4,315
2002	7,918
Total	42,439

The number of children tested for blood lead levels is still quite low in Washington State. DOH estimates that only about 4% of Washington children ever receive a blood lead test.

Out of the 39,302 children tested during 1993–2002, 817 (2.1%) had an elevated blood lead level (10µg/dL or higher).

- 130 children (0.3%) had a blood lead level of 20 µg/dL or higher.
- 158 children (0.4%) had a blood lead level between 15 and 19 µg/dL,
- 529 children (1.4%) had a blood lead level between 10 and 14 µg/dL, and
- 38,485 children (97.9%) had a blood lead level 9µg/dL or less – considered to be not elevated.

The following table shows the percentage of children tested whose blood lead levels were elevated (10 µg/dL or greater) by age group from 1993 through 2002. The data include children ages 0 to 11 years.

Table 2**Percent of children with elevated blood lead levels, by age group**

Age group		1993-1995	1996-1998	1999-2001	2002
< 1 year old	Children tested	1,283	1,419	1,210	490
	Percent elevated	2.0	1.6	1.1	1.2
1–2 years old	Children tested	4,165	6,847	6,124	2,953
	Percent elevated	3.3	2.1	1.5	1.6
3–5 years old	Children tested	1,350	2,897	2,768	2,987
	Percent elevated	6.4	2.1	1.6	1.0
6–11 years old	Children tested	1,144	1,549	1,646	906
	Percent elevated	2.4	2.2	1.0	0.7
Total	Children tested	7,942	12,715	11,749	7,336
	Percent elevated	3.5	2.1	1.4	1.2

Children age 1–2 years are usually at highest risk for lead poisoning because of normal hand-to-mouth activity, increased mobility in their second year, and because their bodies absorb more lead than adult bodies (CDC, Screening Young Children for Lead Poisoning: Guidance for State and Local Health Officials, 1997). These data do not show that pattern. One possible reason for this is the data are not from a population-based sample, i.e. not all children are tested and those tested are not a random sample.

In November 1997 the CDC published new guidelines for screening young children for lead poisoning. The new guidelines recommend that children with elevated lead levels be retested within a shorter time frame than the previous recommendations. Children with blood lead levels in the range of 10-14 µg/dL should receive a retest within three months. Children with blood lead levels in the range of 15 - 19 µg/dL should receive a retest within two months. Children with blood lead levels in the range of 20 – 40 µg/dL should be retested within one week to one month. The higher the blood lead level, the more urgent the need for a diagnostic test. Children with blood lead levels of 70 µg/dL or greater should be tested immediately as an emergency lab test.

For children with elevated lead levels, the number of children who received a retest within the recommended timeframe is low, but has improved over the past two years. Data from the Childhood Blood Lead Registry for 2000 and 2001 indicate less than 30% of children with elevated blood lead levels are receiving follow-up diagnostic testing within the recommended timeframe. They are, however, receiving follow-up at some point if the families can be located after the initial visit and agree to have their child retested.

Table 3

Percent of follow-up tests within CDC timeframe

Blood Lead Level	Number of tests	2000	2001
		Appropriate follow-up	Appropriate follow-up
≥ 20 $\mu\text{g}/\text{dL}$	58	(17) 29%	32 (6) 19%
15-19 $\mu\text{g}/\text{dL}$	20	(3) 15%	25 (5) 20%
10-14 $\mu\text{g}/\text{dL}$	50	(10) 20%	62 (11) 18%

Enhanced Screening Program Provides Free Blood Lead Testing

In an effort to increase blood lead testing of young children in high-risk areas of the state, the DOH Lead Program loaned portable blood lead analyzers and testing supplies to community clinics and other concerned organizations in central Washington. The program started in May, 2000. It is now coordinated by Maria Verduzco, who has an office in Yakima. Her phone number is (509) 454-4235.

Since the program began, over 5,700 children have been tested. About 1.2% of the children tested have had elevated blood lead levels.

Investigations**Elevated Blood Lead Level Investigations**

The Department of Health continues to support local health departments with follow-up of children with blood lead levels of 15 $\mu\text{g}/\text{dL}$ or higher. The funds to conduct environmental investigations and collect and analyze samples are part of a grant from the Centers for Disease Control and Prevention. If local health departments are not able to carry out a home interview or environmental testing, the Department of Health (DOH) conducts the follow-up, if requested. The primary intent of this effort is to make sure children with elevated lead levels continue to receive follow-up to determine their source of exposure.

Exposure Sources

From January 1, 2001 through December 31, 2001, 14 children had blood lead levels of 20 $\mu\text{g}/\text{dL}$ or higher. Five of the 14 children had been identified previously and still had high blood lead levels, although their blood lead levels were decreasing. Three children were adopted and presumably were exposed to lead in their country of birth. One older child was diagnosed with a serious eating disorder and may have eaten a lead weight. Probable sources have been identified for two other children. The other cases are still under investigation. In 2000, a two-year-old girl was found to have a blood lead level of 124 $\mu\text{g}/\text{dL}$, the highest level the registry has ever recorded. She had been given a traditional folk remedy containing lead. She has been hospitalized several times for chelation therapy to help remove the lead from her body.

Collaborations**Collaborations with Local Health Jurisdictions**

DOH collaborated with Public Health Seattle-King County on several screening events and investigations during 2001. One investigation was prompted by abatement work being done at a neighborhood community center where workers were not certified to perform lead abatement work. USEPA shut down the project until the workers could become certified. A blood lead testing clinic was held at an elementary school attended by a lead-poisoned child after it was found to have a substantial amount of deteriorating lead-based paint. No other children at the school were found to have elevated blood lead levels.

Statewide Prevalence Survey**Statewide Child Health and Lead Prevalence Survey completed.**

Results of the 1999 survey reveal that an estimated 1,400 one and two-year-old children in Washington State have lead poisoning.

The survey was conducted between August and November of 1999. It was designed to be representative of all 1-2 year old children in the state, and of 1-2 year old Hispanic children in nine counties in central Washington (Adams, Benton, Chelan, Douglas, Franklin, Grant, Okanogan, Walla Walla, and Yakima). From the survey results, we estimate that 0.9% (95% confidence interval (CI) 0-1.9%) of 1-2 year old children in Washington have elevated blood lead levels, and that 3.8% (95% CI 0-7.8%) of Hispanic children in central Washington have elevated blood lead levels.

The survey results are consistent with the results from the Childhood Blood Lead Registry and surveys previously conducted by DOH in five cities around the state in suggesting a low prevalence of elevated blood lead levels in most of the state, with a somewhat higher prevalence in central Washington.

Of the 900 children randomly selected for the survey, 792 were eligible to participate. The response rate was 69% (548/792).

Statewide Prevalence Survey Results

	Children tested	Percent elevated	95% CI
Washington State	548	0.9	0, 1.9
central Washington	339	3.2	0, 7.5
Rest of state	209	0.5	0, 1.4
Hispanics in central Washington	271	3.8	0, 7.8

Please contact Eric Ossiander, Lead Program Director at (360) 236-4245 for more information about the survey.

Special Investigations

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Dangerous Mexican Candy

DOH investigated candy made in Mexico by Dulmex after an alert was issued by the FDA that one particular candy and wrapper contained dangerous levels of lead. We collaborated with the DOH Food Safety office, the FDA regional office, and several local health jurisdictions. We found these products widely distributed in the state. After having samples tested at an EPA certified lab, we discovered additional candy products made by Dulmex were also dangerous. The candy is sold under the following names: Rollito de Tamarindo, Rollito de Coco, Serpentinatas tamarind candy, and Tablarindo tamarind candy. We issued 2 news releases both in English and Spanish on lead-tainted Mexican candy and the issue received good press coverage across the state. Here are the links to the news releases:

http://www.doh.wa.gov/Publicat/2001_News/01-41.html

http://www.doh.wa.gov/publicat/2001_news/01-37.html

There is additional information about tamarind candy and folk remedies in a recent article published by CDC in the August 2002 issue of MMWR Weekly:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5131a3.htm>

For More Information

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